3. Kabir A, Nadasdy T, Nadasdy G *et al.* An unusual cause of gross hematuria and transient ARF in an SLE patient with warfarin coagulopathy. *Am J Kidney Dis* 2004; **43**: 757–760.
4. Brodsky SV, Satoskar A, Chen J *et al.* Acute kidney injury during warfarin therapy associated with obstructive tubular red blood cell casts: a report of 9 cases. *Am J Kidney Dis.* 2009; **54**: 1121–1126.
5. Brodsky SV, Nadasdy T, Rovin BH *et al.* Warfarin related nephropathy occurs commonly in both those with and without chronic kidney disease and is associated with increased mortality rate. *Kidney Int* 2011; **80**: 181–189.

Sergey V. Brodsky[1], Brad H. Rovin[2] and Lee A. Hebert[2]
[1]*Department of Pathology, Ohio State University, Columbus, Ohio, USA and* [2]*Division of Nephrology, Department of Internal Medicine, Ohio State University, Columbus, Ohio, USA*
Correspondence: *Sergey V. Brodsky, Department of Pathology, Ohio State University, 333 W 10th Street, B078, Graves Hall, Columbus, Ohio 43210, USA. E-mail: sergey.brodsky@osumc.edu*

Kidney International (2012) **82,** 113–114; doi:10.1038/ki.2012.94

'Apple-green birefringence' of amyloid stained by Congo red

To the Editor: On the cover of Issue 2 of the January 2012 *Kidney International* is an excellent illustration of some properties of amyloid stained by Congo red, taken from the article by Sethi *et al.*[1] The figure is said to show apple-green birefringence under polarized light, although readers may be puzzled why the other bright colors, yellow and orange, are not also mentioned.

We studied 160 papers on Congo red–stained amyloid and found that virtually all reported just green birefringence or apple-green birefringence, even though only 31% of the illustrations showed a pure green color.[2] There were discrepancies between the colors reported and illustrated in 66% of the figures, and these were mostly discrepancies between reports of green only and green and another color in the figures, or even between reports of green and no green at all in the figures. The conclusions are that many papers assume that green must be seen to make a diagnosis of amyloid, and that other colors are irrelevant and should be ignored.

We have explained how pure green, or green and other colors, or even other colors without green, may be seen and our papers do not assume specialized knowledge of physical optics.[2–4] We show how the idea arose that green, and particularly green alone, is essential for the diagnosis of amyloid, and why this idea is not correct. We also suggest that the most accurate way to describe the properties of Congo red–stained amyloid is to say that between a polarizer and a crossed analyzer there are anomalous colors.

1. Sethi S, Theis JD, Shiller SM *et al.* Medullary amyloidosis associated with apolipoprotein A-IV deposition. *Kidney Int* 2012; **81**: 201–206.
2. Howie AJ, Owen-Casey MP. Discrepancies between descriptions and illustrations of colours in Congo red-stained amyloid, and explanation of discrepant colours. *Amyloid* 2010; **17**: 109–117.
3. Howie AJ, Brewer DB, Howell D *et al.* Physical basis of colors seen in Congo red-stained amyloid in polarized light. *Lab Invest* 2008; **88**: 232–242.
4. Howie AJ, Brewer DB. Optical properties of amyloid stained by Congo red: history and mechanisms. *Micron* 2009; **40**: 285–301.

Alexander J. Howie[1] and Mared P. Owen-Casey[2]
[1]*Department of Pathology, University College London, London, UK and* [2]*Department of Cellular Pathology, Wrexham Maelor Hospital, Wrexham, UK*
Correspondence: *Alexander J. Howie, Department of Cellular Pathology, Royal Free Hospital, London NW3 2QG, UK. E-mail: a.j.howie@ucl.ac.uk*

Kidney International (2012) **82,** 114; doi:10.1038/ki.2012.89

The Authors Reply: We thank Dr Howie and Dr Owen-Casey for their letter[1] in response to our article.[2] We agree that green and green alone is not the color that one sees on polarization of amyloid material. Indeed, as you point out, there is green and orange-yellow in our illustration, and in fact, as one polarizes the amyloid material, there is a change in color from green to orange-yellow and vice versa, as very nicely described in your studies. However, we use the term 'apple-green' per conventional pathology terminology to reflect the anomalous colors, including green, when amyloid is examined with a crossed analyzer and polarizer. We thank you for bringing this to our attention.

1. Howie AJ and Owen-Casey MP. Apple-green birefringence of amyloid stained by Congo red. *Kidney Int* 2012; **82**: 114.
2. Sethi S, Theis JD, Shiller SM *et al.* Medullary amyloidosis associated with apolipoprotein A-IV deposition. *Kidney Int* 2012; **81**: 201–206.

Sanjeev Sethi[1] and Ahmet Dogan[1]
[1]*Department of Laboratory Medicine and Pathology, Mayo Clinic, Rochester, Minnesota, USA*
Correspondence: *Sanjeev Sethi, Department of Laboratory Medicine and Pathology, Mayo Clinic, 200 1st street SW, Rochester, Minnesota 55905, USA. E-mail: sethi.sanjeev@mayo.edu*

Kidney International (2012) **82,** 114; doi:10.1038/ki.2012.92

Benefits of frequent nocturnal home hemodialysis

To the Editor: Only 87 patients could be randomized for the trial by Rocco *et al.* (Frequent Hemodialysis Network Trial Group).[1] Contrary to the study on frequent short dialysis, in which patients with substantial residual renal function were excluded from randomization, 57.2% of the patients in the control group had a urine output of >500 ml/day (including 19.1% who had a urine output of >1 l/day). Patients with a urine output of >1 l/day do not require high-dose dialysis. In the past such patients were not dialyzed unless their urine output dropped below 1000 ml/day, and they achieved clinically adequate dialysis with long, twice-weekly sessions if the urine output exceeded 500 ml/day.[2] Further indication of an